Listing of Claims:

Claims 1-21 (canceled)

22. (Currently Amended) A method for controlling transmission power of a signal which is received using ~~a certain number of~~ one or more rake fingers, said method comprising the steps of:

        determining a value for a controlled variable;

        comparing the controlled variable value to a target value;

        determining a discrepancy for the controlled variable value based on information that includes ~~using~~ at least the ~~number of~~ one or more rake fingers used in receiving the signal; and

        taking into account said discrepancy when comparing the controlled variable value to the target value.

23. (previously presented) The method of claim 22, further comprising the steps of:

        determining a signal power estimate using a certain part of the radio signal; and

        determining an interference estimate;

        wherein the value for a controlled variable is determined using said signal power estimate and said interference estimate.

24. (Currently Amended) The method of claim 23, wherein:

        determining a first discrepancy between said signal power estimate and the actual signal power is determined using at least the ~~number of~~ one or more rake fingers and the interference estimate:

        a second discrepancy between said interference estimate and the actual interference is determined using at least said signal power estimate; and

        both discrepancies are taken into account when comparing the controlled variable value to the target value.

25. (previously presented) The method of claim 22, wherein the discrepancy depends on the value of the controlled variable.

26. (previously presented) The method of claim 23, wherein the discrepancy depends on the value of the controlled variable.

27. (previously presented) The method of claim 22, wherein the discrepancy is eliminated from the controlled variable value.

28. (previously presented) The method of claim 22, wherein said target value is modified to comprise said discrepancy.

29. (previously presented) The method of claim 22, wherein the signal to interference ratio is used as the controlled variable.

30. (previously presented) The method of claim 22, wherein the method is a closed loop power control method.

31. (previously presented) The method of claim 22, wherein the initial target value is the same for all connections used to carry a certain service.

32. (previously presented) The method of claim 22, wherein:

more than one receiver is receiving the signal;

in each receiver a receiver-specific value for the controlled variable is determined;

the discrepancy is determined for each receiver; and

the receiver-specific discrepancies are taken into account in comparing the receiver-specific controlled variable value to the target value.

33. (previously presented) The method of claim 32, further comprising the step of:

sending a same target value to all the receivers; and

wherein the receiver-specific discrepancies are taken into account in each receiver.

34. (previously presented) A network element of a cellular network, said network element comprising:

means for controlling the transmission power of a signal received using a rake receiver using a determined value of a controlled variable;

means for determining a discrepancy for the determined controlled variable value based on information that includes using at least the number of one or more rake fingers used in receiving the signal; and

means for taking the discrepancy into account when comparing the controlled variable value to a target value.

35. (previously presented) The network element of claim 34, wherein the means for taking the discrepancy into account comprise one of the following: means for eliminating said discrepancy from the controlled variable value, and means for modifying said target value to comprise said discrepancy.

36. (previously presented) The network element of claim 34, said network element further comprising:

means for determining a signal power estimate of a certain part of the received signal; and

means for determining an interference estimate.

37. (previously presented) The network element of claim 34, wherein said network element is a base station.

38. (previously presented) The network element of claim 37, wherein said network element is a base station of a WCDMA network.

39. (previously presented) The network element of claim 34, wherein said network element is a radio network controller of a WCDMA network.

40. (previously presented) A mobile station comprising:

a rake receiver;

means for controlling the transmission power of a received signal using a determined value for a controlled variable;

means for determining a discrepancy for the controlled variable value based on information that includes ~~using~~ at least ~~the number of~~ one or more rake fingers used in receiving the signal; and

means for taking said discrepancy into account when comparing the controlled variable value to a target value.

41. (previously presented) The mobile station of claim 40, wherein the means for taking the discrepancy into account comprise one of the following: means for eliminating said discrepancy from the controlled variable value, and means for modifying said target value to comprise said discrepancy.

42. (previously presented) The mobile station of claim 40, said mobile station further comprising:

means for determining a signal power estimate of a certain part of the received signal; and

means for determining an interference estimate.

43. (previously presented) The mobile station of claim 40, wherein said mobile station is a mobile station of a WCDMA network.